

June 28, 1984

Memo to File:

RE: Enercor
Rainbow Project
PRO/047/011
Uintah County, Utah

On June 27, 1984 John Blake of State Lands and Tom Portle of the Division of Oil, Gas and Mining met at the above-mentioned minesite to evaluate the status of reclamation work performed in the summer of 1983.

Erosional problems and incomplete seeding activity had been cited as problems (see November 22, 1983 memo by Jim Smith). In response to this, State Lands had imposed a May 30, 1984 deadline for remedial action on the part of Enercor.

As of the June 27 inspection no additional work had been performed. Compounding matters additional problems were noted:

- A potential stability problem was observed. Tension cracks along the North edge of the recoutoured area were noted and seemed to be increasing in extent. These extended about 30 yards.
- Erosional gullies described by Jim Smith had deepened. More gullies were observed starting in two locations; the northwest portion and southwest portions of the pad.
- A large percentage of the vegetation which was coming in on the recontoured top was Russian thistle. While grasses coming in where pale and often yellow indicating a possible N deficiency.

OBSERVATIONS:

- Photos were taken of gullies on the north side of the pad exceeding five feet in depth. However, the gullies may have reached a stable disposition due to the high proportion of rocks found in the gullies. (A shovel was used to dig in various locations in the gullies.)
- No bulging was noted on the downslopes below tension cracks.

- Invasion of adjacent native species such as Indian Rice Grass and intermediate wheatgrass was occurring on downslopes. These downslopes were rocky in nature and in areas where gully formation was not a problem appeared erosion resistant.
- Species of grass which were observed on the top of the reclaimed area were wheatgrass, forbs had not germinated as yet.
- In the area associated with the backfilled highwall a 3:1 slope with generally light colored materials from the nearby shales was revegetating rather well. Soil and possibly seeds had washed in from above. This was attributed to the combination of light color and good soils which had washed in.

RECOMMENDATIONS:

- The top of the reclaimed area should be ripped and contour furrows should be part of the landscape. This will serve to: increase infiltration and moisture available locally to plants; decrease the runoff leaving the surface and help to mitigate the erosion problems on the downslope and provide microenvironments more favorable to plant germination and establishment.
- Mulch the surface of the reclaimed area to help retain moisture and decrease the effect of the dark colored tarsand material left on the surface. Mulch should be applied at 2000 pounds per acre and must be crimped in, to enable it to persist in this windy area.
- Fertilize the surface of the reclaimed area since signs of infertility are present. Nitrogen and Phosphorous should be applied at rates of 100 pounds per acre and 80 pounds per acre respectively.
- Fertilize the downslopes to encourage invasion but leave them otherwise untreated.

Stability problems should be addressed in such a manner so as to give the company the option of fixing the unstable pad and gullies or incur the risks of having to come back at a future date to fix them.

This option should be presented only if an inspection later in August or early September reveals that the site has not gotten worse.

Page 3
Enercor - Rainbow Project
June 28, 1984

- A contractor should be enlisted to bid on the entire project including stabilization and the difference between the bond currently held and the bid should be obtained from the company.

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